

WHAT IS CLAIMED IS:

1. A system for cooling electronic assemblies, said system comprising:
 - 5 an equipment enclosure configured to receive a plurality of electronic assemblies in a plurality of mounting locations;
 - a cooling manifold mounted to said equipment enclosure and positioned to distribute chilled air to each of said plurality of electronic assemblies
 - 10 through a plurality of orifices.
2. The system as recited in claim 1, wherein said cooling manifold includes a plurality of vortex tubes each positioned to generate and provide said chilled air to a respective one of said plurality of electronic assemblies through a respective one of said
- 15 plurality of orifices.
3. The system as recited in claim 2, wherein said cooling manifold includes an intake manifold configured to distribute compressed air received at an inlet to said plurality of vortex tubes.
- 20 4. The system as recited in claim 2, wherein said cooling manifold includes an exhaust manifold configured to exhaust warm air away from said plurality of vortex tubes.
- 25 5. The system as recited in claim 1, wherein each of said plurality of electronic assemblies includes a housing having a fan.

6. The system as recited in claim 5, wherein said fan is configured to draw said chilled air mixed with ambient air into said housing.

7. The system as recited in claim 1, wherein said cooling manifold is mounted
5 vertically adjacent to a side wall of said equipment enclosure and wherein a length of said cooling manifold extends vertically along a height of an inside surface of said side wall.

8. The system as recited in claim 7, wherein each of said plurality of mounting
locations is configured to receive an electronic assembly in a horizontal orientation and
10 wherein said cooling manifold is positioned such that each of said plurality of orifices is aligned to provide chilled air to a respective one of said plurality of mounting locations.

9. The system as recited in claim 1, wherein said cooling manifold is mounted
horizontally within said equipment enclosure and includes a length that extends around a
15 perimeter of an inside surface of said equipment enclosure.

10. The system as recited in claim 9, wherein each of said plurality of mounting
locations is configured to receive an electronic assembly in a vertical orientation and
wherein said cooling manifold is positioned within said equipment enclosure such that
20 said plurality of orifices direct said chilled air inward toward a center of said equipment enclosure.

11. The system as recited in claim 10, wherein said cooling manifold includes a
plurality of vortex tubes each positioned to generate and provide said chilled air through a
25 respective one of said plurality of orifices to said plurality of electronic assemblies.

12. The system as recited in claim 11, wherein said cooling manifold includes an intake manifold configured to distribute compressed air received at an inlet to said plurality of vortex tubes.
- 5 13. The system as recited in claim 12, wherein said cooling manifold includes an exhaust manifold configured to exhaust warm air away from said plurality of vortex tubes.
14. The system as recited in claim 13, wherein said equipment enclosure includes a fan positioned to cause ambient air mixed with chilled to flow over said plurality of electronic assemblies.
- 10 15. The system as recited in claim 1, wherein said cooling manifold is configured to distribute chilled air received at an inlet to said plurality of orifices.
- 15 16. A method for cooling electronic assemblies, said method comprising:
- providing an equipment enclosure configured to receive a plurality of electronic assemblies in a plurality of mounting locations;
- 20 mounting a cooling manifold to said equipment enclosure and positioning said cooling manifold to distribute chilled air to each of said plurality of electronic assemblies through a plurality of orifices in said cooling manifold.
- 25 17. The method as recited in claim 16 further comprising forcing chilled air into an inlet of said cooling manifold.

18. The method as recited in claim 16, wherein said cooling manifold includes a plurality of vortex tubes each positioned to generate and provide said chilled air to a respective one of said plurality of electronic assemblies through a respective one of said plurality of orifices.

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19. The method as recited in claim 16 further comprising distributing through an intake manifold compressed air received at an inlet to said plurality of vortex tubes.

20. The method as recited in claim 17 further comprising exhausting warm air away
10 from said plurality of vortex tubes through an exhaust manifold.

21. A cooling manifold for providing chilled air to electronic equipment, said cooling manifold comprising:

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15 a plurality of vortex tubes distributed along a length of said cooling manifold,
wherein each of said plurality of vortex tubes is configured to generate a
portion of said chilled air;

an intake manifold configured to distribute compressed air received at an inlet to
20 said plurality of vortex tubes;

an exhaust manifold configured to exhaust warm air away from said plurality of
vortex tubes.